

Tesla, the maker of rides with price tags that can easily spill into six figures, and a joint venture among G.M. and two Chinese state companies that makes \$5,000 microcars.

But Nio has the advantage of being able to tap into China's vast and well-funded supply chain for electric vehicles. As President Biden mulls how much the United States should invest in electric cars, China already has 14 years of sustained government investment in the sector. China has also used regulations for more than a decade to force multinational companies to transfer their best electric technologies to joint ventures with Chinese manufacturers as a condition of entry into its vast market.

China makes 70 to 80 percent of the world's battery chemicals, battery anodes and battery cells. China similarly controls most of the world's output of high-strength magnets for electric motors, as well as the assembly of those magnets into motors.

"China controls the cards in the battery supply chain," said Vivas Kumar, a former Tesla manager of battery materials.

Nio manufactures practically nothing for its cars by itself. While companies like Tesla make their own batteries and other crucial systems, Nio is able to order parts inexpensively from China's diverse array of electronics manufacturers and auto parts suppliers.

Nio has just 120 engineers to manage its assembly plant in Hefei, the capital of Anhui Province in central China. Nio then pays JAC, a state-controlled automaker also based in Hefei, to send 2,300 experienced assembly line workers to run the factory.

The approach has drawbacks. When demand surged last summer after China brought the coronavirus largely under control, Nio found some suppliers unprepared to increase output quickly. Buyers faced monthslong delays in getting cars delivered.

"We have very small, close to zero, inventory," said Victor Gu, general manager of the Nio factory. "It is a big challenge for the factory, because you need a quick turnaround."

Nio also offers costly customer inducements under its brand, like its Nio Houses. Essentially clubhouses for owners of its cars, they provide coffee shops, libraries and even free day care centers. They take up expensive real estate in 19 Chinese cities, including one at the base of East Asia's tallest building, the 128-story Shanghai Tower.

For a while, Nio also offered an extravagant perk: free recharging of any Nio car throughout a customer's life, as long as the customer keeps buying Nio cars and taking them to one of the company's 183 battery-swapping stations. While a customer sips a coffee, a technician swaps a depleted battery for a fully charged one.

"It only takes about five minutes and costs nothing," said Neo Fan, a 38-year-old Shanghai commercial banker who paid \$83,000 for his Nio ES8 minivan and is entitled to free recharges for the rest of his life.

Extravagance and the pandemic slammed Nio's finances. The company lost \$11,000 for each car sold in the July-through-September quarter.

Government firms stepped up to help. State-owned entities in Hefei joined a national state-owned investment fund last spring in paying \$1 billion in cash to acquire a 24 percent stake in the company. Then, on July 10, the state-owned China Construction Bank led a consortium of banks in extending \$1.6 billion in credit to Nio.

Nio's chairman, Mr. Li, defended his company, portraying it as a start-up and noting that Tesla required many years before it managed last summer to post a fourth consecutive quarter of profits. "We're very happy for Tesla, but this only happened after

17 years," he said in an interview last autumn.

While Mr. Li envisions electric cars at \$25,000 each sometime soon, Nio's cars are now almost as expensive as Tesla's. Nio's entry-level sedan, the ET7, has a starting price of \$58,500 with a 70 kilowatt-hour battery, which can take the car 310 miles. Nio plans a new ET7 model late next year with a much better battery that will double that range.

The company emphasizes making its cars light, for better driving range. Nio estimates that replacing steel with costly aluminum saves 700 pounds for each car. Nio uses part of the weight savings to add other gear, like two electric motors in each car instead of one. That provides better vehicle handling, but it also adds complexity and cost.

Nio allows buyers to customize their cars, including six types of wheels, 11 colors and so many other options that the factory can go a month without building two identical cars. That forces workers to vary their routines constantly.

Mr. Gu, the factory's general manager, said his operation was designed to run at just 20 cars an hour. Many auto assembly lines run twice as fast.

Nio has had little problem finding money lately. It sold more shares in December in New York, raising \$2.6 billion. That is enough money to build a whole row of factories—and Nio already plans to expand production considerably.

Government support for electric cars remains crucial, and Nio appears to be in good official graces.

One recent indication came in September, when a former top Communist Party official, Li Yuanchao, paid an unexpected visit to Nio's display at the Beijing auto show. Mr. Li was replaced as China's vice president in 2018 but remains prominent.

"It was my first time to talk with him," Mr. Li, Nio's chairman, said afterward. "He actually offered many suggestions about battery technology, for how to swap batteries."

CELEBRATING THE LIFE OF SERGEANT TOMMY W. CUDD

HON. RALPH NORMAN

OF SOUTH CAROLINA

IN THE HOUSE OF REPRESENTATIVES

Thursday, February 25, 2021

Mr. NORMAN. Madam Speaker, I rise today to celebrate the life of Sergeant Tommy W. Cudd, a faithful American hero from Union County who passed away on January 28, 2021.

Born on March 10, 1960, Tommy was raised by two lovely parents, the late H.C. and Myrtle Smith Cudd. As a child, he assisted his family on their cattle farm where he learned to work with animals and bail hay. Tommy's natural comfort outdoors gave rise to his love for hunting, fishing, camping, and riding tractors. He graduated as a charter student from Union Academy—the very school in which he built alongside his father and lifelong friend, Robert Brown.

Tommy spent 37 honorable years in law enforcement. He served as a Reserve Officer, Fireman, and Public Safety Officer with the City of Union before joining the Union County Sheriff's Office. Despite his lengthy and challenging battle with leukemia, Tommy persevered through all facets of his job and was awarded "Officer of the Year" on three separate occasions. A true veteran of his field,

former colleagues assert that his enduring work ethic was rare to come by and will certainly be missed.

Gary was happily married to Beth Cudd and had two sons, Caleb and Tommy. His two beautiful granddaughters, Ella and Abby, were his utmost pride and joy. He wanted nothing more than to make them proud. In the words of Sheriff Jeff Bailey, "Tommy was a person who always put everyone first." He was a remarkable husband, father, and friend who chose to dedicate his life to serving a special community. There is no doubt in my mind that he has left an everlasting mark on Union County.

IN MEMORY OF THE PASSING OF
COLONEL ÁNGEL LUIS FLORES-
VELLIDO, DECORATED PUERTO
RICAN VETERAN

HON. JENNIFFER GONZÁLEZ-COLÓN

OF PUERTO RICO

IN THE HOUSE OF REPRESENTATIVES

Thursday, February 25, 2021

Miss GONZÁLEZ-COLÓN. Madam Speaker, I rise today to honor the memory of one of the many brave Puerto Ricans who have served our nation in our Armed Forces, the late Colonel Ángel Luis Flores-Vellido.

For over a hundred years, the soldiers from Puerto Rico have proved themselves second to none in battle, side by side with their comrades from across the nation. Colonel Flores-Vellido distinguished himself in a long military career, among the hundreds of thousands of American citizens from Puerto Rico who stepped forward and served under the nation's flag, in defense of its security and national interest around the world, in wartime and in peacetime.

Ángel Flores-Vellido served the nation starting in the Puerto Rico National Guard in the late 1950s and then the Regular Army as an Artillery Officer and Foreign Area Officer, completing higher military studies at the Command and General Staff College and the Army War College. His service spanned from Vietnam to Central and South America, to the Joint Chiefs at the Pentagon and the CIA under President George H.W. Bush, with achievements that earned him numerous high awards, commendations and decorations including the Legion of Merit, Bronze Star, Air Medal, Defense Superior Service Medal, Joint Service Commendation and many others, before taking his well-earned retirement in 1993.

Throughout his career and in his retirement, he exemplified patriotism and the finest traditions and values of military service and personal honor.

Colonel Flores-Vellido passed away earlier this week and will be laid to rest in Dallas, Texas. He shall be remembered, with his comrades in arms from the past and from the present, for adding to the pages of our history and proving the worth of the Puerto Rican soldier.

We share the sorrow of his family and friends on his passing, at the same time as we celebrate a life of service and commitment.

Today we honor his memory and his service and reaffirm our commitment to do justice for our veterans and their families for all they have done for us.